in the southern hemisphere the increase of numbers is not so great as in the northern, nor is it very noticeable in any particular quarter; and I commend this fact to the attention of the southern observatories, in the hope that more attention may be given to the search for these objects.

There are two points that have occurred to me continually while engaged upon the maps: the exceeding nearness to one another of very many of the nebulæ suggests the probability of physical connection in many instances analogous to that of double stars, and I recommend it as a hopeful field of research whether orbital motions can be detected by the spectroscope or by photography. I have also again and again noticed configurations which remind one of groups of stars having a common proper motion; and the second suggestion I would make is the likelihood of a good result from an examination for proper motion.

With regard to the second object that I had in view in constructing the maps, I have little to say except that I hope they may serve to indicate, though roughly no doubt, the parts of the heavens likely to repay research, inasmuch as a graphical representation must necessarily have some advantage over a catalogue for this purpose.

Note on B.A.C. 5,255 = *Brisbane* 5,525. By A. M. W. Downing, M.A., D.Sc.

My attention has been called to No. 5,255 of the British Association Catalogue of Stars, by Dr. E. Lamp, who informs me that, on looking for the occultation predicted in the *Nautical Almanac* for March 25 last, he was unable to find any star in the assigned place, and that on several subsequent occasions he was equally unsuccessful. The place given in the B.A.C. depends on one observation made at Paramatta, and Dr. Lamp suggests that this observation may really have been one of the neighbouring star 3 *Scorpii*, with an error of 10′ in the recorded declination, as well as an error in the R.A. The reference to Taylor V., 2,873, given in the B.A.C., is misleading, as Taylor merely gives the approximate position taken from Brisbane's Catalogue, and, as a reference to his MSS. shows, on reducing his attempt to observe this supposed star, found that he had really observed 2 *Scorpii*. A note to the recorded position of the latter star in the Cape Catalogue for 1880 says: "No seventh magnitude star was visible on 1878 June 12 nearer R.A. $15^h\ 47^m$ and N.P.D. 115° 3′, which is the place of Brisbane 5,525." The Cordoba *Durchmusterung* gives no star in this place, although there is a 9·8 mag. star exactly 1^m later in R.A., and of the same declination. Lastly, Mr. Crommelin kindly informs me that he has looked for the supposed star on two separate occasions, but has been unable

to see any object in the assigned place. It may safely be concluded, therefore, that no star as bright as 6–7 mag. exists in the place given for B.A.C. 5,255, and the entry should, accordingly, be struck out wherever it occurs in the Occultation Section of successive *Nautical Almanacs*, up to and including that for the year 1895.

Nautical Almanac Office:
1894 *June* 5.

On the Orbit of OΣ 82. By J. E. Gore.

The angular motion of this binary pair from 1845·96 to 1892·00 has been only 82°; but I find that the motion has been round the apoastron end of the ellipse, and that a considerable arc of the apparent orbit has been described between the above dates. I have computed the orbit by the Glasenapp-Kowalsky method, and find the following provisional elements:

Elements of OΣ 82.

P = 90·54 years.	☊ = 21° 32′
T = 1827·36	λ = 339° 32′ (or 20° 28′)
e = 0·335	a = 0″·80
i = 52° 7′	μ = −3°·976

The value of λ, 339° 32′, is measured in the direction of the position angles, and 20° 28′ in the direction of the orbital motion, which is retrograde.

The following is a comparison between the measures used in calculating the orbit and the positions computed from the above elements.

Epoch.	Observer.	θ_o	θ_c	$\theta_o-\theta_c$	ρ_o	ρ_c	$\rho_o-\rho_c$
1845·96	Mädler	231°·7	234°·96	−3°·26	0″·9	0″·68	+0″·22
1848·66	O. Struve	230·4	227·05	+3·35	1·04	0·75	+0·29
1866·73	Dembowski	195·9	196·6	−0·7	0·94	1·05	−0·11
1879·695	Burnham	179·4	177·9	+1·5	0·54	0·93	−0·39
1891·01	Hall	151·56	151·98	−0·42	0·79	0·68	+0·11
1892·00	Burnham	149·3	148·67	+0·63	0·62	0·65	−0·03

Assuming that the mass of the system is equal to the mass of the Sun, the "hypothetical parallax" would be

$$p=\frac{a}{P^{\frac{2}{3}}}=0''\cdot04.$$

The magnitudes of the components are 8·0 and 8·7, and the approximate position of the star for 1880·0 is

R.A. $4^h\ 15^m\ 55^s$
Decl. +14° 46′.